

A REVIEW OF THE GENUS *SCUTOBRUCHUS* KINGSOLVER
(COLEOPTERA: BRUCHIDAE), WITH DESCRIPTIONS OF
FOUR NEW SPECIES, AND NEW SYNONYMY

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Abstract.—The genus *Scutobruchus* is found only in South America and the Galapagos Is. and breeds only in seeds of *Prosopis* spp. (Leguminosae). Four new species, *curtitropis*, *ferocis*, *terani*, and *vinalicola*, are described, and additional host and distributional records for *S. ceratioborus* (Philippi) and *S. gastoi* Kingsolver are included. *Kytorhinus cassivorus* Motschulsky is synonymized with *S. ceratioborus*.

Four new species of *Scutobruchus* have been discovered in southern South America since I described the genus in 1968. Descriptions of these species and additional host and distributional data for *Scutobruchus ceratioborus* (Philippi) and *S. gastoi* Kingsolver, and a key to males of the six species is presented.

Species of *Scutobruchus* breed only in seeds of *Prosopis* spp. (Leguminosae) (mesquite, algarroba, algarobilla), and are apparently restricted to the South American continent although *S. ceratioborus* has apparently been introduced into the Galapagos Islands. Host associations are listed in Tables 1 and 2. Host records are listed verbatim from specimen labels except those generously supplied by Sra. Susana M. L'Argentier indicated by superscript 1 in the tables.

Scutobruchus is remarkable in the development of a longitudinal ventral keel at the apex of the median lobe in the male genitalia (Figs. 4, 6). The consistent and characteristic shape of this keel and of the lateral processes of the median lobe provide the principal bases for species discrimination in this genus. The form and relative position of the internal sac armature in the median lobe also are diagnostic but not necessary for identification if the apex of the median lobe can be seen clearly. The lateral lobes of the male genitalia are not diagnostic.

Specimens of *Scutobruchus* are readily sexed by the presence of a pit on the first visible abdominal sternum (basisternum) in males (Fig. 8) (absent in females), and the pygidial apex reflexed into the emarginate fifth sternum in males (pygidium oblique in females). Antennae are similar in the two sexes (Fig. 5).

Scutobruchus is apparently most closely related to *Algarobius*, also a *Prosopis* seed breeder, but which is distributed from southwestern United States through Mexico and Central America to Colombia and Venezuela. Males in *Algarobius* lack the abdominal pit but the female pygidium is bisulcate. The scutellum in both genera is elongated. Habitus resemblance between individuals of the two genera is striking.

Specimens of *Scutobruchus* cannot be segregated to species with certainty on external characters although both *gastoi* and *ferocis*, new species, lack a lateral metatibial carina (Fig. 26) and are restricted in their geographical and host ranges.

Scutobruchus is tentatively divided into two groups based on male genitalia and retention or loss of the lateral metatibial carina: *gastoi* and *ferocis* form one group; *ceratioborus*, *vinalicola*, new species, *curtirobis*, new species, and *terani*, new species, form the other although the male genitalia of *terani* suggest that this species is somewhat intermediate between the two groups.

Scutobruchus Kingsolver

Description.—Elongate-ovate.

Color: Integument reddish brown to piceous. Vestiture of yellowish-brown, brown, reddish, or gray slender hairs, pattern distinct or not.

Structure: Head rather broad; eyes prominent, deeply emarginate, not sexually dimorphic; antenna of both sexes as in Fig. 5. Pronotum campaniform, lateral margins slightly arcuate, lateral carina obtuse or obsolete; disk convex, slightly channelled mediobasally. Elytra together slightly wider than long; striae regular in course, intervals subequal basally, 3rd, 4th, 5th, and 6th (occasionally 2nd) striae each with small basal denticle. Scutellum longer than wide, bidentate apically. Pygidium sloping at about 30° from horizontal at base but vertical apically; apex in ♂ reflexed to fit emarginate 5th sternum; apex in ♀ not reflexed, 5th sternum not emarginate, slightly bulbous ventrally, face of ♀ pygidium lacking sulci; basisternum of ♂ with small or large oval depression or pit often filled with farinose deposit. Pro- and mesolegs not modified; metafemur incrassate, slightly sulcate ventrally; ventral margin with 1 long and 2 or 3 shorter denticles near apex; metatibia nearly straight, with short, acute mucro and 4 to 6 coronal denticles, lateral carina present or absent. Male genitalia lacking ventral valve but with strongly developed ventral keel and lateral processes. Lateral lobes depressed, rounded apically, cleft between them extending nearly to base. (Description modified from original (Kingsolver, 1968).)

Type-species.—*Bruchus ceratioborus* Philippi, by original designation.

KEY TO SPECIES OF *SCUTOBRUCHUS* BASED ON MALES

1. Metatibia lacking lateral carina (Fig. 26); abdominal pit less than ½ length of basisternum (Fig. 23); ♂ genitalia with lateral processes (alae) of median lobe broad, winglike (Figs. 16, 22); ventral keel rounded apically (Figs. 18, 25) 2
- Metatibia with distinct lateral carina (Fig. 7); abdominal pit large or small; lateral alae and ventral keel of various forms 3
2. Male genitalia with lateral alae and ventral keel as in Figs. 22, 25; northern Chile *gastoi* Kingsolver
- Male genitalia with lateral alae and ventral keel as in Figs. 16, 18; northern Argentina *ferocis* Kingsolver, new species
3. Lateral processes at apex of median lobe of unequal length (Fig. 10); ventral keel hooked apically (Fig. 12); abdominal pit less than ⅓ length of basisternum (Fig. 13) *vinalicola* Kingsolver, new species
- Lateral processes of median lobe of equal length (Figs. 4, 9, 14); ventral keel not hooked; basal pit of various sizes 4

4. Ventral keel elongated, attenuate (Fig. 6); lateral processes at apex of median lobe nearly vertical (Figs. 4, 6); abdominal pit about $\frac{1}{2}$ length of basisternum (Fig. 8) *ceratioborus* (Philippi)
- Ventral keel short and rounded, or acute; lateral processes various 5
5. Ventral keel short, acute apically (Fig. 17); lateral processes at apex of median lobe vertical, curved mediad (Fig. 14); abdominal pit small, inconspicuous, less than $\frac{1}{4}$ length of basisternum (Fig. 15)
..... *curtittropis* Kingsolver, new species
- Ventral keel deeply rounded (Fig. 11); lateral processes horizontally alate (Fig. 9); abdominal pit large, deep, $\frac{1}{2}$ length of basisternum (Fig. 8)
..... *terani* Kingsolver, new species

***Scutobruclus ceratioborus* (Philippi)**

Figs. 1–8, 27

Bruchus ceratioborus Philippi, 1859: 670; Philippi, 1887: 162; Pic, 1913: 20 (as *ceriatoborus*); Porter, 1933: 86.

Algarobius ceratioborus: Olalquiaga Faure, 1949: 89.

Acanthoscelides ceratioborus: Blackwelder, 1946: 759.

Scutobruclus ceratioborus: Kingsolver, 1968: 283; Kingsolver et al., 1977: 115; Koch and Campos, 1978: 87.

Kytorhinus cassivorus Motschulsky, 1874: 207. NEW SYNONYMY.

Bruchus crassivorus (sic): Pic, 1913: 23.

Acanthoscelides crassivorus (sic): Blackwelder, 1946: 759.

Bruchus vagenotatus Pic, 1938: 19; Kingsolver, 1968: 283.

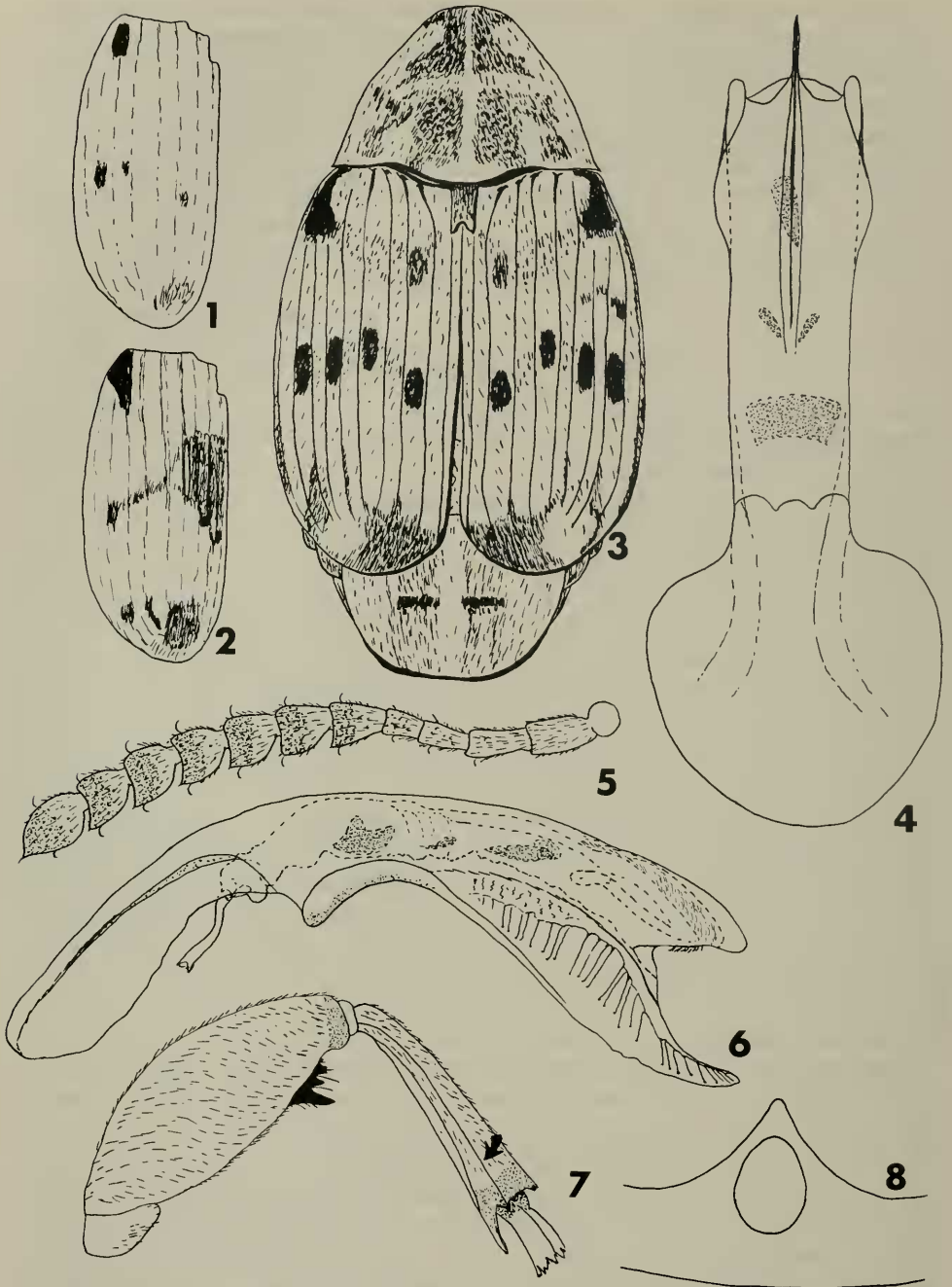
Acanthoscelides vagenotatus: Blackwelder, 1946: 761.

Description.—Length, 3.1–4.5 mm; width, 1.6–2.0 mm.

Color: Integument reddish brown to piceous, eyes black; vertex of head with vertical, piceous median stripe sometimes expanded above eyes; clypeus usually darker basally; labrum reddish; antenna with apical $\frac{1}{2}$ of each segment usually darker (Fig. 5); elytra usually reddish brown with darker brown pattern (Fig. 2, 3) varying to nearly unicolorous (Fig. 1). Vestiture of yellowish-brown and brown hairs, hairs paler on venter; pronotum usually with distinct median line of paler hairs (Fig. 3); pygidium with yellowish-gray hairs on darker integument, median stripe of hairs paler.

Salient structural characters: Basal abdominal pit of δ about $\frac{1}{2}$ length of basisternum (Fig. 8); metatibia with distinct lateral carina (Fig. 7); median lobe of δ with ventral keel elongate, attenuate (Fig. 6), lateral processes flanking apical orifice nearly vertical, slightly flared laterally (Fig. 4).

Distribution.—New locality and host records for *S. ceratioborus* since my 1968 paper are as follows: ARGENTINA: Catamarca Prov.: Rt. 38, 150 km S Andalgalá, 16 February 1971, 10 January 1969, 4 November 1972, *Prosopis nigra*; Mollecito, 10 January 1969, pods of *Prosopis alba* and *nigra*; Rt. 60, 47 mi SE Tinogasta, 25 February 1978, *Prosopis torquata*; Rt. 63, 33 mi N Minas Capillitas, 28 February 1978; Rt. 307, 6 km N Sta. María, 11 January 1980, *Prosopis flexuosa*. Tucumán Prov.: Amaicha del Valle, 8 January 1969, pods *Prosopis torquata*. Santiago del Estero Prov.: Loreto, 14 February 1971, *Prosopis reptans*; Icaño, July 1904; 20 km N Icaño, December 1904; 40 km W Salavina, 1909; Rt. 9, N Rio Saladillo, 24 February 1971; Rt. 34, 31 mi SE La Banda, 6 December 1976,



Figs. 1-8. *Scutobruchus ceratioborus*. 1, Left elytron, light pattern phase. 2, Same, darkest color phase. 3, Habitus, median color phase. 4, ♂ genitalia, median lobe, ventral. 5, Antenna. 6, ♂ genitalia, median lobe, lateral. 7, Left metafemur and metatibia. 8, ♂ basisternum, median portion with outline of basal pit.

Prosopis alba. La Rioja Prov.: Aimogasta, 25 February 1978; Rt. 38, 3 km SE Punta de los Llanos, 14 February 1971, *Prosopis sericantha*; Rt. 9, 9 km N Bazan, 15 February 1971, *Prosopis chilensis*; S nr. Aimogasta, Rt. 9, 15 February 1971, *Prosopis chilensis*. Córdoba Prov.: Rt. 38, Camino a los Mogotes, 25 February 1977, *Prosopis chilensis*. Entre Ríos Prov.: Rt. 126, 9 mi NE La Paz, 15 March 1977, *Prosopis nigra*. Mendoza Prov.: Rt. 40, 8 mi NE Mendoza, 22 February 1977, *Prosopis alpataco*; 8 mi N Tunuyan, 20 February 1977, *Prosopis alpataco*; Rt. 143, 11 mi NW Alvear, 18 February 1977, *Prosopis flexuosa*. San Juan Prov.: Matagusanos, 29 February 1970, *Prosopis ruscifolia*; Rt. 20, 32 mi SE Caucete, 19 February 1970, *Prosopis chilensis*; 82 km E San Juan, 21 April 1967; Rt. 140, 18 mi NE Mendoza-San Juan border, 22 February 1977, *Prosopis flexuosa*. San Luis Prov.: Rt. 7, 12 km SE Mercedes, 19 November 1976, *Prosopis caldenia*. CHILE: Antofagasta Prov.: 5 km N Quillagua, 2 October 1966, 26 September 1967, 6 February 1969. Iquique Prov.: Pica, 28 September 1967. Tarapaca Prov.: Pampa del Tamarugal, 5–15 August 1973, *Prosopis strombulifera*. ECUADOR: Machala, 30 June 1980, pods of *Prosopis juliflora*. Galapagos.—Española Is., E side peninsula at coast, N of summit, 18 April 1970, blacklight; Duncan Is., 1–17 December 1905.

Hosts.—Host records are summarized in Tables 1 and 2.

Remarks.—This is the most widespread species of *Scutobruchus*. Its range extends from Ecuador and the Galapagos (both previously unreported) through Peru and Chile (xeric regions) to most of northern and central Argentina.

The type-locality is Valdivia Prov., Chile, and the male lectotype is deposited in the Museo Nacional de Historia Natural, Santiago, Chile.

***Scutobruchus terani* Kingsolver, NEW SPECIES**

Figs. 9, 11, 28

Scutobruchus sp. G: Kingsolver et al., 1977: 115.

Description.—Length, 3.6–4.1 mm; width, 2.1–2.3 mm.

Color: Integument reddish brown above, slightly darker beneath; head with median T-shaped, piceous mark; antenna dark. Vestiture of yellowish-gray and brown slender hairs in pattern similar to that of *S. ceratioborus* (Figs. 1–3); pygidium with median stripe of setae, vestiture evenly distributed except sometimes with bare patches either side of median line at basal $\frac{1}{3}$.

Male genitalia: Median lobe in lateral aspect with ventral keel deep, broadly rounded apically (Fig. 11); in ventral aspect, lateral processes flanking apical orifice slightly expanded horizontally (Fig. 9); armature of internal sac consisting of a single large spine near base of sac and 2 pairs of spines near middle of sac (Fig. 9).

Types.—Holotype ♂, ARGENTINA: Catamarca, Copacabana, 1 December 1968, in seeds of *Prosopis argentina*, A. Terán. Allotype ♀, 9 ♂, 2 ♀ paratypes, same data. Other paratypes: Mendoza Prov.: Rt. 40, 8 mi NE Mendoza, 22 February 1977, in pods *Prosopis alpataco*, 14 ♂, 17 ♀; 35 mi N Tunuyán, 17 February 1978, in pods *Prosopis alpataco*, 1 ♂. Catamarca Prov.: Rt. 60, 21 mi SE Tinogasta, 25 February 1978, in seeds *Prosopis argentina*, 3 ♂, 3 ♀. La Rioja Prov.: January 1970, in *Prosopis abbreviata*, 3 ♂, 2 ♀.

Holotype and paratypes deposited in the Colección Fundación-Instituto Miguel

Table 1. *Scutobruachus* species and their *Prosopis* host plants.

<i>Scutobruachus</i> Species	<i>Prosopis</i> Species
<i>S. ceratioborus</i> (Philippi)	<i>P. abbreviata</i> Benth. ¹ , <i>P. alba</i> Griseb., <i>P. alata</i> Phil., <i>P. caldenia</i> Burkart, <i>P. chilensis</i> (Mo.) Stuntz, <i>P. flexuosa</i> DC., <i>P. juliflora</i> (Swartz) DC., <i>P. nigra</i> (Griseb.) Hieron., <i>P. reptans</i> Benth., <i>P. ruscifolia</i> Griseb., <i>P. sericantha</i> Hook & Arn., <i>P. strombulifera</i> (Lam.) Benth., <i>P. torquata</i> (Lag.) DC.
<i>S. curtitropis</i> , new species	<i>P. alba</i> , <i>P. chilensis</i> , <i>P. flexuosa</i> ¹ , <i>P. nigra</i>
<i>S. ferocis</i> , new species	<i>P. ferox</i> Griseb.
<i>S. gastoi</i> Kingsolver	<i>P. strombulifera</i> , <i>P. tamarugo</i> F. Phil.
<i>S. terani</i> , new species	<i>P. abbreviata</i> , <i>P. alata</i> Phil., <i>P. argentina</i> Burkart, <i>P. chilensis</i> ¹ , <i>P. flexuosa</i> ¹
<i>S. vinalicola</i> , new species	<i>P. abbreviata</i> , <i>P. affinis</i> Sprengel (also as <i>P. algarobilla</i> Griseb. of authors and insect labels), <i>P. alba</i> , <i>P. alata</i> Phil., <i>P. caldenia</i> , <i>P. chilensis</i> , <i>P. elata</i> (Burk.) Burk. ¹ , <i>P. flexuosa</i> , <i>P. hasleri</i> Harms, <i>P. nigra</i> , <i>P. ruscifolia</i> , <i>P. strombulifera</i> , <i>P. torquata</i> , <i>P. vinalillo</i> Stuckert

¹ Records courtesy Sra. Susana M. L'Argentier, Jujuy, Argentina.

Lillo, Tucumán, Argentina. Allotype and paratypes deposited in the National Museum of Natural History, Washington, D.C.; the Bernardino Rivadavia Museum of Natural Sciences, Buenos Aires; Museo de Ciencias Naturales, La Plata, Argentina; C. D. Johnson Collection, Flagstaff, Arizona; and Museo Nacional de Historia Natural, Santiago, Chile.

Remarks.—I have not found external morphological characteristics to distinguish this species from *S. ceratioborus*. In coloration, size, shape, and size of the basal abdominal pit in the male, the two species appear identical. Only by the consistently distinctive characters in the male genitalia can they be separated (cf. Figs. 4 and 6, 9 and 11).

The slight horizontal expansions of the lateral processes suggest a more intermediate trend toward the alae in *S. gastoi* and *ferocis*.

I am pleased to name this species for my good friend Arturo Terán of the Lillo Institute, Tucumán.

Scutobruachus vinalicola Kingsolver, NEW SPECIES

Figs. 10, 12, 13, 29

Scutobruachus sp. F: Kingsolver et al., 1977: 115.

Description.—Length, 2.6–4.0 mm; width, 1.5–2.2 mm.

Color: Integument mostly reddish brown except the following piceous: anterior ½ of each segment of antennal club; diffuse spot on frontoclypeal suture; T-shaped mark on vertex; disk of pronotum with central area darker than margins; indistinct spots and bars on elytra; sometimes with ventral ⅓ of metafemur darker; sometimes with diffuse areas on thoracic pleura and sterna; entire pygidium except for median reddish stripe and narrow lateral stripes paler. Vestiture of bronze, gray, and dark-brown slender hairs.

Structure: As in *ceratioborus* except: Basisternal pit small, less than ⅓ length of basisternum (Fig. 13).

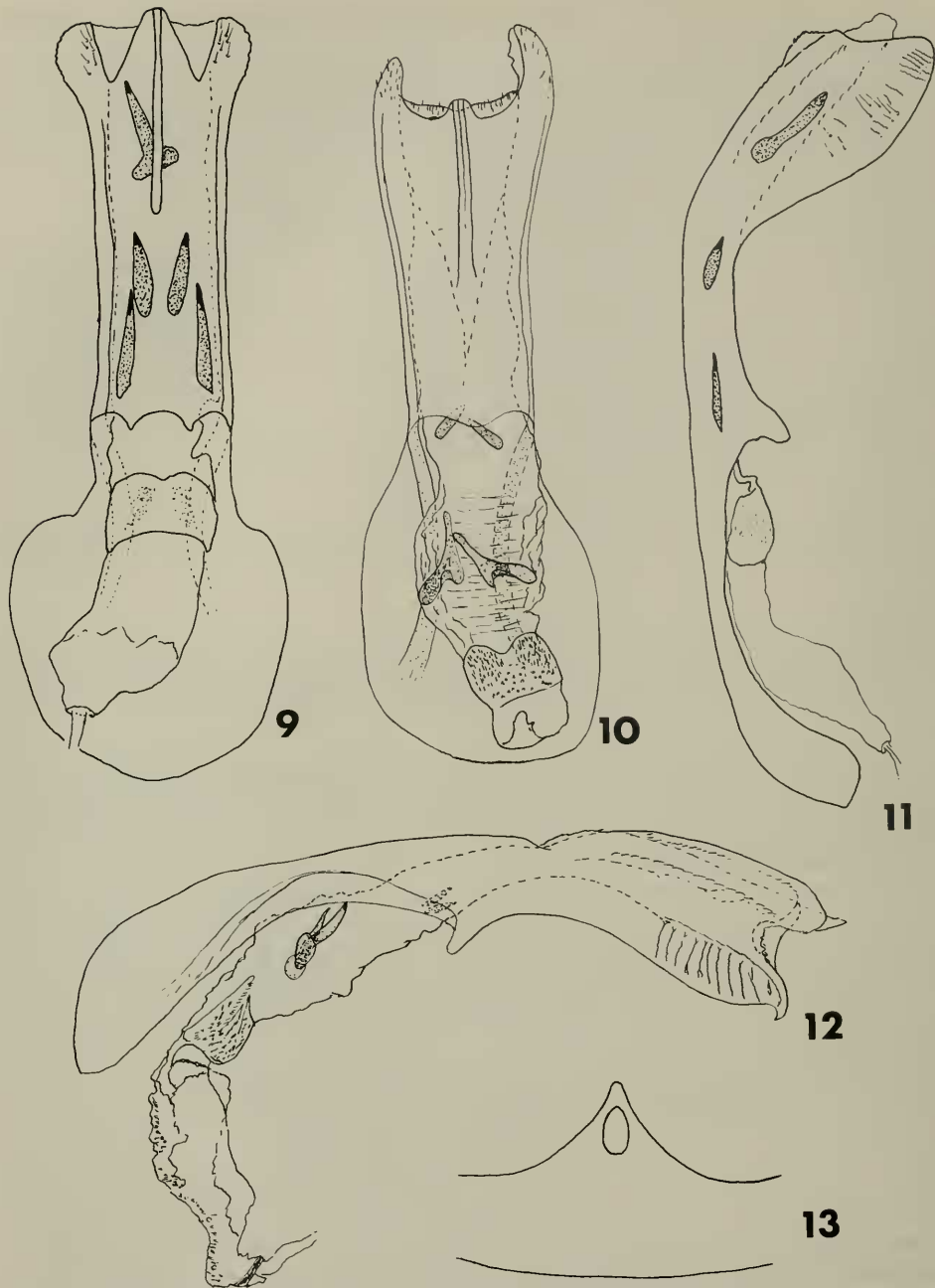
Table 2. *Prosopis* species and their *Scutobruchus* predators. Scientific names of hosts and bruchids are listed in Table 1.

<i>Prosopis</i> Species	<i>Scutobruchus</i> Species
<i>P. abbreviata</i>	<i>S. ceratioborus</i> ¹ , <i>S. terani</i> , <i>S. vinalicola</i>
<i>P. affinis</i>	<i>S. vinalicola</i>
<i>P. alba</i>	<i>S. ceratioborus</i> , <i>S. curtitropis</i> , <i>S. vinalicola</i>
<i>P. alpataco</i>	<i>S. terani</i> , <i>S. vinalicola</i> , <i>S. ceratioborus</i>
<i>P. argentina</i>	<i>S. terani</i>
<i>P. caldenia</i>	<i>S. ceratioborus</i> , <i>S. vinalicola</i>
<i>P. chilensis</i>	<i>S. ceratioborus</i> , <i>S. curtitropis</i> , <i>S. terani</i> ¹ , <i>S. vinalicola</i>
<i>P. elata</i>	<i>S. vinalicola</i> ¹
<i>P. ferox</i>	<i>S. ferocis</i>
<i>P. flexuosa</i>	<i>S. ceratioborus</i> , <i>S. terani</i> ¹ , <i>S. vinalicola</i>
<i>P. hassleri</i>	<i>S. vinalicola</i>
<i>P. juliflora</i>	<i>S. ceratioborus</i>
<i>P. nigra</i>	<i>S. ceratioborus</i> , <i>S. curtitropis</i> , <i>S. vinalicola</i>
<i>P. reptans</i>	<i>S. ceratioborus</i>
<i>P. ruscifolia</i>	<i>S. ceratioborus</i> , <i>S. vinalicola</i>
<i>P. sericantha</i>	<i>S. ceratioborus</i>
<i>P. strombulifera</i>	<i>S. ceratioborus</i> , <i>S. gastoi</i> , <i>S. vinalicola</i>
<i>P. tamarugo</i>	<i>S. gastoi</i>
<i>P. torquata</i>	<i>S. ceratioborus</i> , <i>S. vinalicola</i>
<i>P. vinalillo</i>	<i>S. vinalicola</i>

¹ Records courtesy of Sra. Susana M. L'Argentier, Jujuy, Argentina.

Male genitalia: Median lobe with apex of keel recurved (Fig. 12); lateral processes flanking apical orifice not of equal length (Fig. 10); armature on internal sac consisting of 2 slender spines at middle of sac, 2 larger spines and shield-shaped sclerite in apical 1/2.

Types.—Holotype ♂, ARGENTINA: La Rioja between San Martin and Casa Piedra, 1 km W of El Mandano, 29 December 1970, in *Prosopis* sp., Solbrig coll. no. 4221. Allotype ♀, 3 ♂ and 3 ♀ paratypes same data. Other paratypes: ARGENTINA: Formosa Prov.: Dto. Patino, Estancia La Primavera, 8–9 January 1972, in *Prosopis alba*, *hassleri*, *nigra*, *ruscifolia*, *vinalillo*, 27 ♂, 24 ♀; Rt. 81, 44 mi NW Formosa, 10 December 1976, in pods *Prosopis alba*, 4 ♂, 3 ♀; Rt. 81, 15 mi NW Formosa, 10 December 1976, in pods *Prosopis algarobilla* (× *nigra* (?)), 2 ♂, 1 ♀ in pods from ground, *Prosopis nigra*, 7 ♂, 3 ♀ in pods *Prosopis algarobilla*, 1 ♂; Rt. 11, 12 mi N Chaco-Formosa border, 8 December 1976, in pods *Prosopis nigra*, 2 ♂; Rt. 90, 4 mi SW Pirane, 11 December, in pods *Acacia* sp. (!), 1 ♂. Catamarca Prov.: Mollecito, 10 January 1969, in *Prosopis vinalillo*, 2 ♂; Recreo, 1 June 1899, 1 ♂; Rt. 62, 26 mi S Andalgalá, 1 March 1977, in pods *Prosopis abbreviata*, 4 ♂, 2 ♀; Andalgalá IBP Desert Site, 6 December 1973, flowers *Atamisquea emarginata*, 1 ♂; Rt. 62, 34 mi S Andalgalá, 27 February 1978, beating *Prosopis chilensis*, 1 ♂; Rt. 40, 13 mi NE Tinogasta, 26 February 1978, sweeping *Larrea*, 1 ♂; 61 mi S Andalgalá, 25 December 1970, *Prosopis* sp., 1 ♂; 50 km W Andalgalá, 31 October 1972, on *Cassia*, 1 ♂, 3 ♀; Andalgalá, 30 October 1972, 1 ♂, 4 November 1972, 1 ♂; 15 mi S Colpes, 27 October 1972, 1 ♂. Tucumán Prov.: Horca Molle, nr. Tucumán, 18 October 1968, 8 ♂, 4 ♀. Santiago del Estero Prov.: Rio Salado, Wagner coll., 1 ♂. La Rioja Prov.: Rt. 9, S of Aimogasta, 15 February



Figs. 9-13. 9, *Scutobruchus terani*, ♂ genitalia, median lobe, ventral. 10, *S. vinalicola*, same. 11, *S. terani*, ♂ genitalia, median lobe, lateral. 12, *S. vinalicola*, same. 13, *S. vinalicola*, ♂ basisternum, median portion with outline of basal pit.

1971, in *Prosopis chilensis*, Vuill. #1020, 6 ♂; Rt. 9, 46 mi N Bazan, 15 February 1971, in *Prosopis torquata*, Vuill. # 1021, 1 ♂; Rt. 20, 23 mi E Chepes, 20 February 1978, in *Prosopis torquata*, 2 ♂; Rt. 9, 9 km N Bazan, 15 February 1971, in *Prosopis chilensis*, 2 ♂. San Juan Prov.: Rt. 20, 32 mi SE Caucete, 19 February 1978, in *Prosopis chilensis*, 2 ♂, 1 ♀; Rt. 20, 3 mi E Caucete, 19 February 1978, in *Prosopis torquata*, 3 ♂, 2 ♀; Rt. 20, 1 mi SE Caucete, 19 February 1978, in *Prosopis strombulifera*, 2 ♂, in *Prosopis alpataco*, 2 ♂; 82 km E San Juan, 21 April 1967, 1 ♂, 1 ♀. Córdoba Prov.: Rt. 38, Capilla del Monte, 22 February 1978, in *Prosopis alba*, 2 ♂, 3 ♀; Alta Gracia, March 1959, 3 ♂, 3 ♀; Rt. 38, Camino a los Mogotes, 25 February 1977, in pods *Prosopis chilensis*, 2 ♀; Rt. 38, 8 mi NW Cruz del Eje, 24 February 1977, in pods *Prosopis chilensis*, 1 ♂, 4 ♀; Rt. 7, 1 mi E Córdoba-San Luis border, 19 November 1976, in pods *Prosopis caldenia*, 4 ♂, 1 ♀; Tuclame, Rt. 38, 26 December 1970, in *Prosopis alba*, Solbrig 4211(1), 1 ♂. Entre Ríos Prov.: Rt. 126, 9 mi E La Paz, 15 March 1977, in pods *Prosopis nigra*, 4 ♂, 4 ♀. Mendoza Prov.: Rt. 40, 4 mi N Mendoza, 19 February 1978, in pods *Prosopis strombulifera*, 1 ♂; Rt. 40, 35 mi S Tunuyán, 19 February 1977, in pods *Prosopis flexuosa*, 2 ♂; Rt. 143, 11 mi N Alvear, 18 February 1977, in pods *Prosopis flexuosa*, 1 ♂, 1 ♀. San Luis Prov.: Rt. 188, 20 mi W La Pampa-San Luis border, 17 February 1977, in pods *Prosopis flexuosa*, 2 ♂, 2 ♀; Rt. 7, 12 mi SE Mercedes, 19 November 1976, in pods *Prosopis caldenia*, 1 ♀. La Pampa Prov.: Rt. 35, 9 mi N Santa Rosa, 18 November 1976, in pods *Prosopis caldenia*, 5 ♂, 3 ♀; Rt. 35, 26 mi W Buenos Aires-La Pampa border, 17 November 1976, in pods *Prosopis caldenia*, 1 ♂, 2 ♀; Rt. 35, 85 mi N Santa Rosa, 15 February 1978, in *Prosopis caldenia*, 1 ♂, 4 ♀; Rt. 188, 38 mi W Realico, 15 February 1978, in *Prosopis caldenia*, 2 ♂, 1 ♀. Buenos Aires Prov.: San Fernando, June 1957, 1 ♂. (Province not known): San Pedro Orchard, 12 April 1927, M. Kisliuk, 1 ♂; intercepted 12 April 1969, Miami, Florida, Plant Quarantine 51482, in *Prosopis* sp. (vinal), 4 ♂, 2 ♀. PARAGUAY: Pres. Hayes Prov., Trans-Chaco Hwy. 9, 369 km NW Asunción, 18 January 1976, in pods *Prosopis ruscifolia*, 48 ♂, 55 ♀.

Holotype ♂, allotype ♀, and paratypes deposited in the National Museum of Natural History, Washington, D.C. (Type # 100460). Paratypes also deposited in the following collections: Bernardino Rivadavia Museum of Natural Sciences, B.A.; Colección Fundación-Instituto Miguel Lillo, Tucumán, Argentina; Museo de Ciencias Naturales, La Plata, Argentina; Canadian National Collections, Ottawa, C. D. Johnson Collection, Flagstaff, Arizona; Texas A&M University, College Station; and Museo Nacional de Historia Natural, Santiago, Chile.

Remarks.—Except for the generally darker appearance and the smaller basal pit on the metasternum, this species is indistinguishable from *ceratioborus* on external characters. The recurved apex of the ventral keel and the asymmetrical lateral processes of the median lobe distinguish *vinalicola* from any other species in this genus. The lateral metatibial carina places it in the group with *ceratioborus*.

The name *vinalicola* is derived from "vinal," the common name of *Prosopis ruscifolia*, a host for this species and "cola" (Latin = dweller in).

***Scutobruchus curtitropis* Kingsolver, NEW SPECIES**

Figs. 14, 15, 17, 28

Scutobruchus sp. H: Kingsolver et al., 1977: 115.

Description.—Length, 2.9–4.2 mm; width, 1.9–2.1 mm.

Color: Similar to *S. vinalicola* except body generally more reddish with dark spots and bars more prominent; pygidium reddish with broad piceous stripe either side of median reddish stripe; metafemur all red.

Structure: Resembling *vinalicola* except basisternum with very small basal pit (Fig. 15); median lobe of δ genitalia with short ventral keel (Fig. 17), lateral processes curved mesad, concave on mesal faces; armature of internal sac as shown (Fig. 14).

Types.—Holotype δ , ARGENTINA: La Rioja, Aimogasta, 25 February 1978, in pods *Prosopis chilensis*; 2 δ paratypes, same data. Other paratypes: ARGENTINA: Córdoba Prov.: Rt. 38, Capilla del Monte, 22 February 1978, in pods *Prosopis alba*, 3 δ . Catamarca Prov.: Andalgalá, 4 November 1972, 1 δ . "Argentina", intercepted Washington, D.C. at quarantine, 8 March 1917, in seeds *Prosopis juliflora nigra*, 1 δ ; same data except in *Prosopis juliflora* "blanco", 1 δ . "Catamarca a Salta", January 1907, 13 δ , 8 η .

Holotype deposited in Colección Fundación-Instituto Miguel Lillo, Tucumán, Argentina. Paratypes deposited in the same institution and in the National Museum of Natural History, Washington, D.C.; the Museo Nacional de Historia Natural, Santiago, Chile; the Bernardino Rivadavia Museum of Natural Sciences, Buenos Aires; and the C. D. Johnson Collection, Flagstaff, Arizona.

Remarks.—This species seems to be most closely related to *S. vinalicola* in the small abdominal pit, and in the shape of the lateral processes of the median lobe in the male genitalia.

The name is derived from "*curtus*" (Latin = short), and "*tropis*" (Latin = keel), and refers to the short ventral keel of the median lobe.

Scutobruachus gastoi Kingsolver

Figs. 19–26, 29

Scutobruachus gastoi Kingsolver, 1968: 285; Reyes and Hermosilla, 1974 (biology); Kingsolver et al., 1977: 115; Koch and Campos, 1978 (biology).

Description.—Length, 2.5–3.0 mm; width, 1.25–1.50 mm.

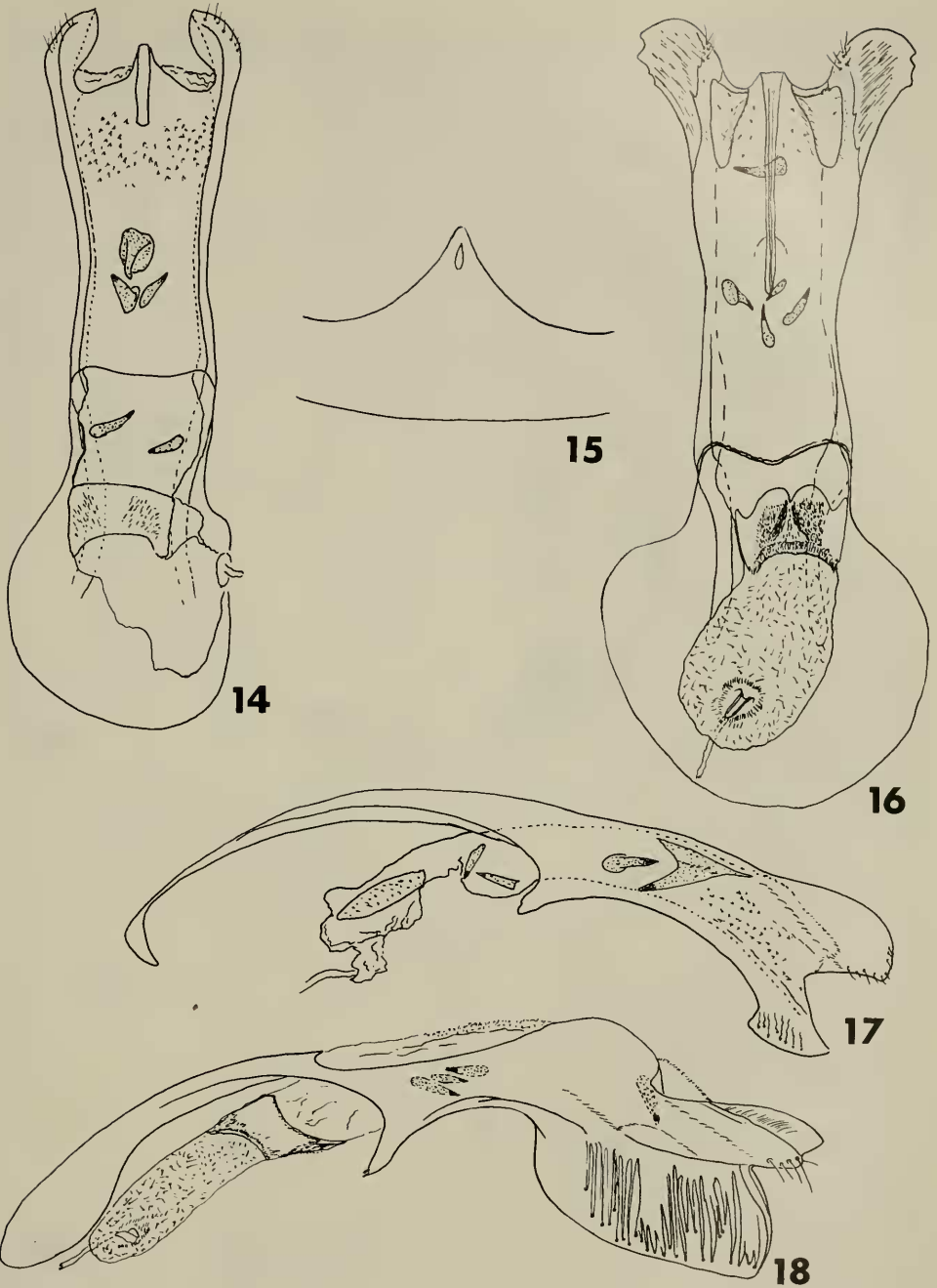
Color: Integument reddish brown to piceous; pronotum varying from reddish brown with median stripe piceous to nearly all piceous; elytra varying from nearly unicolorous reddish brown to the pattern in Fig. 20 with lateral borders and apices piceous; pygidium reddish, often with darker stripes laterally. Vestiture of gray, yellowish, and brown slender setae.

Structure: Abdominal pit less than $\frac{1}{2}$ length of basisternum (Fig. 23); metatibia lacking lateral carina (Fig. 26); median lobe of male genitalia as in Figs. 22 and 25.

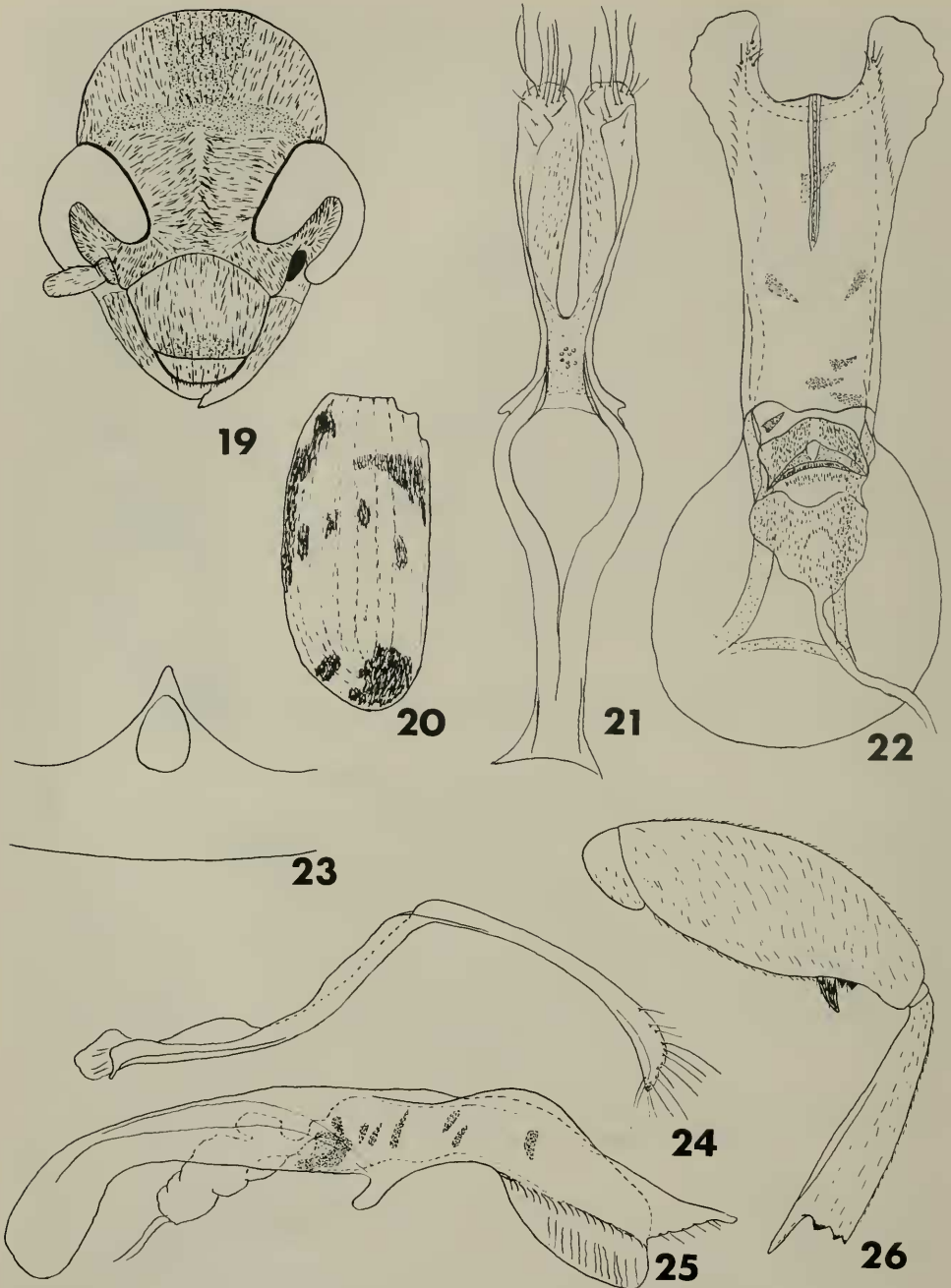
The first two characters are shared with *S. ferocis*; Figs. 16 and 17 should be compared for the third character. Geographical distribution of the two species appears to be discrete with *gastoi* known only from northern Chile and *ferocis* known only from northern Argentina. The type-locality of *gastoi* is Canchones, Tarapaca Prov., Chile, near La Guaiaca. The holotype is deposited in the National Museum of Natural History, Washington, D.C.

Hosts.—Known host plants are *Prosopis tamarugo* and *P. strombulifera*.

Distribution.—New records since 1968. CHILE: Tarapaca Prov.: Junoy, 24 October 1968, *Prosopis* sp.; Pampas del Tamarugal, 5 July 1956, November 1968,

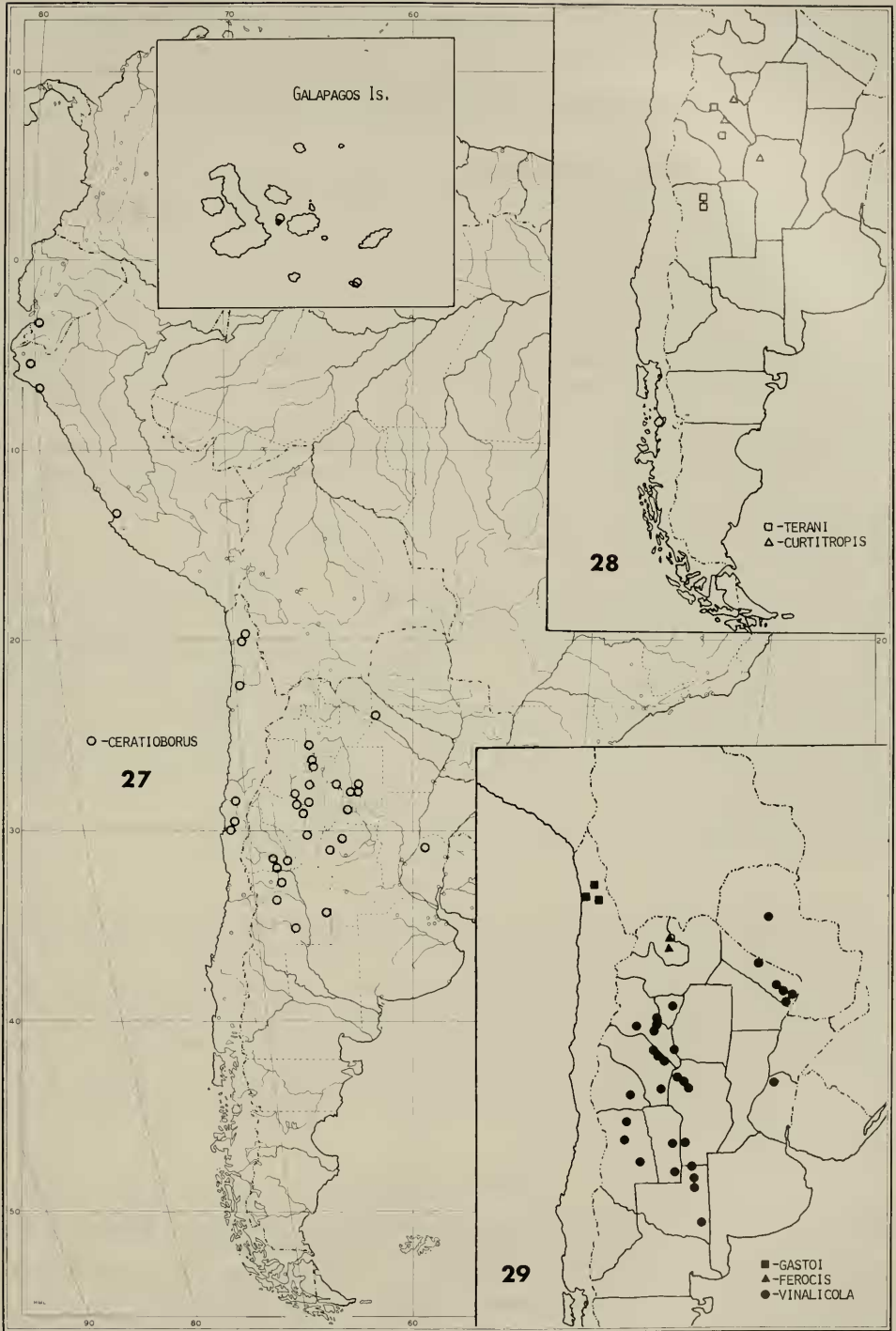


Figs. 14-18. 14, *Scutobruchus curtitropis*, ♂ genitalia, median lobe, ventral. 15, *S. vinalicola*, ♂ basisternum, median portion with basal pit. 16, *S. ferocis*, ♂ genitalia, median lobe, ventral. 17, *S. curtitropis*, median lobe, lateral. 18, *S. ferocis*, same.



Figs. 19-26. *Scutobrychus gastoi*. 19, Head, cephalic. 20, Left elytron, darkest pattern. 21, ♂ genitalia, lateral lobes and tegmen, ventral. 22, Same, median lobe, ventral. 23, ♂ basisternum, median portion with outline of basal pit. 24, ♂ genitalia, lateral lobes and tegmen, lateral. 25, Same, median lobe, lateral. 26, Left metafemur and metatibia.

SOUTH AMERICA



Figs. 27–29. Known distribution of *Scutobruchus* spp. 27, Open circles, *S. ceratioborus* (Galapagos Is., inset). 28, Open squares, *S. terani*; open triangles, *S. curtitropis*. 29, Solid squares, *S. gastoi*; solid triangles, *S. ferocis*; solid circles, *S. vinalicola*.

Prosopis strombulifera; Llamara, 28 July 1968; Tiliviche, 4 December 1966; Arica, in *Prosopis tamarugo*; between Iquique and Pica, 9 February 1969, *Prosopis* sp. Antofagasta Prov.: San Pedro de Atacama, 12 September 1967.

***Scutobruchus ferocis* Kingsolver, NEW SPECIES**

Figs. 16, 18, 29

Scutobruchus sp. I: Kingsolver et al., 1977: 115.

Description.—Body length, 3.3–3.7 mm; width, 1.9–2.0 mm. Similar to *S. gastoi* Kingsolver.

Color: Integument mostly reddish brown with indistinct or no pattern on elytra and pronotum, if pattern present, as piceous lateral margins, sometimes with two small, dark spots on each third interval; pronotum usually uniformly reddish brown, pygidium of both sexes reddish brown occasionally with piceous sublateral streaks or entirely piceous with median yellowish stripe; legs reddish brown with metafemur sometimes darker ventrally. Vestiture of grayish-yellow slender hairs in irregular mottled pattern on dorsum, more densely distributed on venter.

Structure: Metatibia lacking lateral carina; abdominal pit less than $\frac{1}{2}$ length of basisternum (Fig. 23). Male genitalia (Figs. 16, 18) similar to those of *S. gastoi* but with lateral alae and ventral keel distinctly shaped.

Types.—Holotype ♂, ARGENTINA: Jujuy Prov.: Uquia, 6 January 1972, A. Terán, seeds of *Prosopis ferox*. Allotype ♀ and 34 ♂, 19 ♀ paratypes, same data. Other paratypes: ARGENTINA: Jujuy Prov.: Rt. 9, 4 mi N Tilcara, 8 March 1977, in pods *Prosopis ferox*, 2 ♂, 4 ♀. Holotype and paratypes in the Colección Fundación-Instituto Miguel Lillo, Tucumán, Argentina. Allotype and paratypes in the National Museum of Natural History, Washington, D.C.

Remarks.—This species is smaller than *ceratioborus* and approaches *S. gastoi* in size and color, and shows a close relationship with *gastoi* in the form of the male genitalia and lack of a lateral metatibial carina.

The specific name is taken from the host plant, *Prosopis ferox*.

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